

Amendments to the Claims:

1. (Currently Amended) A probe ~~having which consists essentially of 17 to about 1000 consecutive nucleotides of the chicken Rfp-Y or B class I genes wherein at least about 17 consecutive nucleotides of said probe are 17 consecutive nucleotides of SEQ ID NO: 1 which comprises about 17 to about 1,000 nucleotides.~~

2. (Original) A probe according to claim 1, which comprises about 100 to about 1,000 nucleotides.

3. (Currently Amended) A probe ~~having which consists essentially of 17 to about 1000 consecutive nucleotides of the chicken class I genes in the B or Rfp-Y system wherein at least about 17 consecutive nucleotides of said probe are 17 consecutive nucleotides of SEQ ID NO: 2 which comprises about 17 to about 1,000 nucleotides.~~

4. (Original) A probe according to claim 3, which comprises about 100 to about 1,000 nucleotides.

5. (Original) The probe of SEQ ID NO: 1.

6. (Original) The probe of SEQ ID NO: 2.

7. (Currently Amended) A fragment of the probe according to claim 5, which comprises ~~about 17 to about 625~~ nucleotides.

8. (Currently Amended) A fragment of the probe according to claim 6, which comprises ~~about 17 to about 674~~ nucleotides.

9. (Canceled)

10. (Currently Amended) A probe which is at least about 90% homologous to the probe of [claim 5] SEQ ID NO:1.

11. (Canceled)

12. (Currently Amended) A probe which is at least about 90% homologous to the probe of [claim 6] SEQ ID NO:2.

13. (Original) A method for determining the *Mhc* genotype of a chicken, comprising:

- (a) providing a genomic DNA sample from at least one chicken;
- (b) digesting said genomic DNA sample with at least one restriction endonuclease to obtain restriction fragments;
- (c) resolving said restriction fragments;
- (d) optionally transferring said resolved restriction fragments to one or more hybridization membranes and optionally immobilizing said transferred restriction fragments on said hybridization membranes;
- (e) incubating said resolved restriction fragments with a first probe according to claim 1 or claim 3 under conditions such that said first probe hybridizes with said resolved restriction fragments, wherein said first probe is labeled;
- (f) washing said resolved restriction fragments to remove unhybridized first probe;
- (g) creating an image of said labeled first probe hybridized to said resolved restriction fragments such that a restriction pattern is formed;

(h) determining the *Mhc* genotype of said at least one chicken from said restriction pattern; and

(i) optionally stripping said first probe and incubating said resolved restriction fragments with a second probe according to claim 1 or claim 3 under conditions such that said second probe hybridizes with said resolved restriction fragments, wherein said second probe is labeled and repeating steps (f) - (h).

14. (Original) A method according to claim 13, wherein said resolved restriction fragments are incubated with one probe.

15. (Original) A method according to claim 13, wherein said resolved restriction fragments are incubated with a first probe and a second probe.

16. (Original) A method according to claim 15, wherein one of said first probe and said second probe is specific for the *Rfp-Y* system and the other of said first probe and said second probe is specific for the *B* system.

17. (Original) A method according to claim 15, wherein one of said first probe and said second probe is SEQ ID NO: 1 and the other said first probe and said second probe is SEQ ID NO: 2.

18. (Original) A method for selecting a chicken which is resistant to a preselected disease, comprising:

(a) determining the *Mhc* genotype of at least one chicken according to the method of claim 13; and

(b) correlating said *Mhc* genotype to said resistance to said preselected disease.

19. (Canceled)

20. (Canceled)

21. (New) A probe which is at least about 90% homologous to the probe of claim 1.

22. (New) A probe which is at least about 90% homologous to the probe of claim 3.

23. (New) A probe which is at least about 90% homologous to the probe of claim 7.

24. (New) A probe which is at least about 90% homologous to the probe of claim 8.

25. (New) A probe which consists essentially of 17 to about 1000 consecutive nucleotides of the chicken Rfp-Y or B class I genes wherein at least 17 consecutive nucleotides of said probe are 17 consecutive nucleotides of SEQ ID NO: 1, and a non-hybridizing tail.

26. (New) A probe which consists essentially of 17 to about 1000 consecutive nucleotides of the chicken Rfp-Y or B class I genes wherein at least 17 consecutive nucleotides of said probe are 17 consecutive nucleotides of SEQ ID NO: 2, and a non-hybridizing tail.